

# Dagstuhl Seminar Programme

All times are CEST (local Dagstuhl time)!!!

For remote participation, the zoom link is

<https://dagstuhl-de.zoom.us/j/8407859125?pwd=OGJPWWt5M1BNNM2ZNd2NBWnNzVVhjUT09>

## Monday 06/09/21 Introductions

10:30 Opening

10:40 Introduction to SAT [Matti Järvisalo]

11:40 Discussion

12:00 Lunch Break

14:00 Introduction to Description Logics [Ian Horrocks]

15:00 Discussion

15:20 Topics:

- Propositional reasoning in DL solvers: past experience and new ideas?
- Theory on 'hard (and easy) cases': phase transitions, parameterised complexity and its explanatory power on reasoner performance

15:30 Coffee Break

16:00 Parameterized Complexity of SAT & Related Problems [Stefan Szeider]

16:30 Discussion

## Tuesday 07/09/21 Benchmarks

10:30 Existing benchmarks from DL [David Tena Cucala]

11:00 Existing SAT competitions & benchmarks [Matti Järvisalo]

11:30 Discussion

12:00 Lunch Break

14:00 SGGs decision procedures for fragments of first-order logic [M. P. Bonacina]

15:00 Existing SMT competitions & benchmarks [Cesare Tinelli]

15:30 Coffee Break

16:00 Discussion

16:00 Topics:

- Benchmarks: random/artificial/real/...experience and views?
- Competitions: how to promote development of benchmarks and reasoners?  
How to keep them up-to-date/fresh?

## Wednesday 08/09/21 Syntax, infrastructure, and APIs

10:30 SAT: clauses and beyond? [Alexey Ignatiev]

11:00 Scaling SAT/MaxSAT encodings to large instances with SLIM [Stefan Szeider]

11:30 Discussion

12:00 Lunch Break

14:00 **DL: OWL and the OWL API...is it all sorted?** [tba]

15:00 **Discussion**

15:20 Topics:

- Dealing with datatypes: (how) can we share the pain across developers?

### **Thursday 09/09/21 Non-standard/new reasoning problems**

10:30 **SAT: beyond min/max-SAT, etc.** [Jean-Marie Lagniez]

11:00 **Proofs, proof checkers, trust, and certification** [Jakob Nordstrom]

12:00 Lunch Break

15:00 **Discussion**

15:20 Topics:

Topics:

- DL: kernels/justifications/provenance [Ana Ozaki]
- DL proofs?

### **Friday 10/09/21 Wrap-up and next steps**